FILE 'CAPLUS' ENTERED AT 14:31:29 ON 04 MAY 2004
L1 906 TOYOOKA?/AU
L2 1 L1 AND ANALYTICAL CHEM?/JT
L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
TI New fluorogenic reagent having halogenobenzofurazan structure for thiols: 4-(aminosulfonyl)-7-fluoro-2,1,3-benzoxadiazole

=> file scisearch
=> s L2<cit>
SmartSELECT INITIATED
SEL L2 1- CIT
L3 SEL L2 1- CIT : 1 TERM

SET SMARTSELECT OFF
SET COMMAND COMPLETED
FILE 'SCISEARCH' ENTERED AT 14:34:46 ON 04 MAY 2004
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S L3
L4 114 L3

=> file registry
=> e L4
E1 4 L3T4.25/BI
E2 4 L3T425/BI
E3 482 --> L4/BI
E4 1 L4,1/BI
E5 2 L4.13.2/BI
E6 36 L40/BI
E7 62 L400/BI
E8 1 L4000/BI
E9 3 L40000/BI
E10 2 L40001/BI
E11 2 L40002/BI
E12 2 L40003/BI
L5 482 "L4"/BI
L5 ANSWER 1 OF 482 REGISTRY COPYRIGHT 2004 ACS on STN
RN 669025-55-2 REGISTRY
CN Protein L4 (Ixodes scapularis salivary gland) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 16: PN: WO2004019883 TABLE: 2 claimed protein
FS PROTEIN SEQUENCE
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS
=> sel L5 name
E13 THROUGH E999 ASSIGNED

=> index bioscience
INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 14:44:15 ON 04 MAY 2004
L6 QUE L5 64 FILES HAVE ONE OR MORE ANSWERS
L7 QUE TOYOOKA?/AU 41 FILES HAVE ONE OR MORE ANSWERS
L8 QUE L7 AND ANALYTICAL CHEM?/JT 4 FILES HAVE ONE OR MORE ANSWERS

=> file registry
L9 5 DANSYLAMIDE
L9 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN
RN 76587-46-7 REGISTRY
CN 1-Naphthalenesulfonamide, N-chloro-5-(dimethylamino)- (9Cl) (CA INDEX NAME)
OTHER NAMES:
CN N-Chlorodansylamide
FS 3D CONCORD
MF C12 H13 Cl N2 O2 S
CI COM
LC STN Files: BIOSIS, CA, CAPLUS
=> sel L9 name
HIGHEST E# ASSIGNED. SELECT NOT VALID.

=> index bioscience
L10 QUE L9 34 FILES HAVE ONE OR MORE ANSWERS
L11 QUE (RN76587-46-7) OR (1-NAPHTHALENESULFONAMIDE) OR DANSYLAMIDE OR (N-CHLORODANSYLAMIDE) OR FLUOROPHORE OR (PHOTOLUMINISCENT COMPOUND) 55 FILES HAVE ONE OR MORE ANSWERS
L12 QUE APOCARBONIC ANHYDRASE 24 FILES HAVE ONE OR MORE ANSWERS
L13 QUE L11 AND L12 5 FILES HAVE ONE OR MORE ANSWERS
L14 QUE (L9 AND L10) AND L11 34 FILES HAVE ONE OR MORE ANSWERS
L15 QUE L8 AND L12 0 FILES HAVE ONE OR MORE ANSWERS
L16 QUE L12 AND L14 5 FILES HAVE ONE OR MORE ANSWERS
L17 QUE L5 AND L12 0 FILES HAVE ONE OR MORE ANSWERS
L18 QUE L5 AND L14 0 FILES HAVE ONE OR MORE ANSWERS
L19 QUE L12 AND L14 5 FILES HAVE ONE OR MORE ANSWERS
=> d rank
F1 4 USPATFULL
F2 2 CAPLUS
F3 1 MEDLINE
F4 1 PASCAL
F5 1 SCISEARCH
=> file f1-f3, f5
L20 3 L19
L21 3 DUP REM L20 (0 DUPLICATES REMOVED)
L21 ANSWER 1 OF 3 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN
AN 2000:105031 SCISEARCH
GA The Genuine Article (R) Number: 279WW
TI Zinc biosensing with multiphoton excitation using carbonic anhydrase and improved fluorophores
AU Thompson R B (Reprint); Maliwal B P; Zeng H H
CS UNIV MARYLAND, SCH MED, DEPT BIOCHEM & MOL BIOL, 108 N GREENE ST, BALTIMORE, MD 21201 (Reprint)
CYA USA
SO JOURNAL OF BIOMEDICAL OPTICS, (JAN 2000) Vol. 5, No. 1, pp. 17-22.
Publisher: SPIE-INT SOCIETY OPTICAL ENGINEERING, 1000 20TH ST, BELLINGHAM, WA 98225.
ISSN: 1083-3668.
DT Article; Journal
FS LIFE; ENGI
LA English
REC Reference Count: 18
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Previously, we had shown that the zinc-dependent binding of certain fluorescent aryl sulfonamide inhibitors could be used with

apocarbonic anhydrase II to transduce the level of free zinc as a change in the fluorescence of the inhibitor. While inhibitors such as dansylamide, ABD-M, and ABD-N made possible quantitation of free zinc in the picomolar range with high selectivity, they have only modest absorbance which limits their utility. We describe here the synthesis and properties of two new probes, Dapoxyl(TM) sulfonamide and BTCS, and their use in zinc biosensing. Dapoxyl sulfonamide exhibits a dramatic increase and blue shift in its emission upon binding to holocarbonic anhydrase II, as well as a 20-fold increase in lifetime: it is thus well suited for quantitating free Zn(II) down to picomolar ranges. The anisotropy of BTCS increases fivefold upon binding to the holoprotein, making this probe well suited for anisotropy-based determination of zinc. BTCS and ABD-N are efficiently excited with two photon excitation using 1.5 ps pulses from a titanium sapphire laser, and exhibit the increased zinc-dependent anisotropy response anticipated on the basis of photoselection. (C) 2000 Society of Photo-Optical Instrumentation Engineers. [S1083-3668(00)00201-X].

L21 ANSWER 2 OF 3 USPATFULL on STN
AN 96:72765 USPATFULL
TI Selective metal ion detection using a photoluminescent indicator binding to a macromolecule-metal ion complex
IN Thompson, Richard B., Baltimore, MD, United States
Jones, Eric R., Honolulu, HI, United States
PA The United States of America as represented by the Secretary of the Navy, Washington, DC, United States (U.S. government)
PI US 5545517 19960813
AI US 1994-213409 19940315 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Chan, Christina Y.; Assistant Examiner: Mohamed, Abdel A.
LREP McDonnell, Thomas E., Karasek, John J.
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 663
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is a process and apparatus for metal ion detection. The process of the invention has the steps of (1) disposing, in an analyte medium, a macromolecule suitable for selective complexation with the target metal ion species; (2) disposing, in the analyte medium, an appropriate photoluminescent indicator that will emit in a measurably different manner when bound to the metallomacromolecule complex, compared with its unbound state; (3) exciting the photoluminescent indicator species; and (4) monitoring the emission of the photoluminescent indicator species to detect changes in its emission. The apparatus of the invention has (1) a macromolecule suitable for selective complexation with the target metal ion species disposed in an analyte medium; (2) an appropriate photoluminescent indicator that will emit in a measurably different manner when bound to the metallomacromolecule complex, compared with its unbound state, also disposed in the analyte medium; (3) a source for exciting the photoluminescent indicator species; and (4) a detector for monitoring the emission of the photoluminescent indicator species to detect changes in its emission.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:706822 CAPLUS
DN 123:137737
TI Energy transfer-based fiber optic metal ion biosensor
AU Thompson, Richard B.; Ge, Zhengfang; Patchan, Marcia W.; Fierke, Carol A.
CS School Medicine, University Maryland, Baltimore, MD, 21201, USA
SO Proceedings of SPIE-The International Society for Optical Engineering (1995), 2388(Advances in Fluorescence Sensing Technology II), 138-47
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English
AB Recently, the authors have demonstrated a fluorescence-based fiber optic biosensor for zinc in aq. solns. Binding of zinc to the active site of human apocarbonic anhydrase II is transduced by subsequent binding of a fluorescent inhibitor, dansylamide, to the zinc in situ, resulting in large changes in the wavelength, quantum yield and lifetime of the dansylamide emission. These fluorescence changes can be readily measured through optical fiber, and yield subnanomolar detection limits and 50 dB dynamic range with excellent selectivity. However, the dansylamide is only excitable in the UV, a spectral regime where fiber optic attenuation is very high; longer wavelength fluorescent inhibitors akin to dansylamide are not yet available. Thus the authors chose a different transduction scheme wherein the enzyme is labeled with a suitable fluorescent tag and the inhibitor is colored, absorbing in the visible region. When zinc is bound the inhibitor can then bind, bringing it in close proximity to the fluorescent tag and allowing energy transfer to occur; the energy transfer can be followed by changes in intensity or, preferably, lifetime. Recent results using gas laser and laser diode excitation will be shown.